IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Previously Presented) A wheel bearing assembly which comprises:

an inner member;

an outer member;

at least one circumferential row of rolling elements rollingly interposed between the inner and outer members;

a sealing device sealing an annular end space defined between the inner and outer members; and

a magnetized encoder mounted on one of the inner and outer members which serves as a rotary member and including an elastic member made of a base material mixed with a powder of magnetic material, said elastic member being bonded by vulcanization to the magnetized encoder and having a series of alternating magnetic poles of opposite polarities formed in a direction circumferentially of the rotary member;

wherein under a thermal endurance test condition in which the magnetized encoder is subjected to 1,000 thermal cycles each consisting of heating at 120°C for one hour followed by cooling at -40°C for one hour, the magnetized encoder retains the following initial magnetic characteristics when measured at a point 2.0 mm distant from a magnetic sensor:

Single pitch deviation: ± 2% or less and

Magnetic flux density: ± 3 mT or higher.

2. (Original) The wheel bearing assembly as claimed in Claim 1, wherein the single pitch deviation within that range and the magnetic flux density within that range are obtained by selecting materials for the base material of the elastic member, and for the powder of the magnetic material, and/or adjusting a mixing ratio of the magnetic material to the base material (wt%).

3. (Original) The wheel bearing assembly as claimed in Claim 1, wherein the magnetized encoder forms the sealing device.

4. (Original) The wheel bearing assembly as claimed in Claim 3, wherein the magnetized encoder has a generally L-shaped section including a cylindrical portion mounted on the rotary member and a radial upright portion extending radially outwardly from the cylindrical portion, said radial upright portion having a radial outer edge spaced a slight distance from the other of the inner and outer members which serves as a stationary member.

5. (Previously Presented) The wheel bearing assembly as claimed in Claim 3, wherein the sealing device includes first and second annular sealing plates fitted to members of the inner and outer members that are different from each other;

wherein said first and second annular sealing plates are of a generally L-shaped section each including a cylindrical portion and a radial upright portion and confront with each other, wherein the first sealing plate is mounted on one of the inner and outer members which serves as the rotary member with the radial upright portion thereof positioned on an outer side of the bearing assembly;

wherein said elastic member mixed with the powder of the magnetic material is bonded by vulcanization to the radial upright portion of the first sealing plate and has the alternating magnetic poles of the opposite polarities defined therein in the direction circumferentially thereof;

wherein the second sealing plate is provided with a side lip slidingly engaged with the radial upright portion of the first sealing plate and a radial lip slidingly engaged with the cylindrical portion of the first sealing plate; and

wherein the radial upright portion of the first sealing plate has a radial outer edge spaced a slight distance radially from the cylindrical portion of the second sealing plate.

6. (Original) The wheel bearing assembly as claimed in Claim 1, wherein the elastic member is made of a heat resistant nitrile rubber.

7. (Previously Presented) The wheel bearing assembly of claim 5, wherein said elastic member has an end cover portion formed integrally therewith and adapted to cover a radially outer edge portion of said radial upright portion of said first sealing plate.

8. (Previously Presented) The wheel bearing assembly of claim 5, wherein an outer end of said cylindrical portion of said second sealing plate has a wall thickness smaller than a remaining part of said cylindrical portion of said second sealing plate, said outer end being bent radially inward.

9. (Previously Presented) The wheel bearing assembly of claim 6, wherein said magnetic material is made of ferrite.

10. (Previously Presented) The wheel bearing assembly as claimed in claim 1, wherein the elastic member is made of one of acrylic rubber and fluorine containing rubber

11. (Previously Presented) An elastic member of a magnetized encoder disposed on a rotary member of a wheel bearing assembly, comprising:

a base material; and

a powder of magnetic material, said elastic member having a series of alternating magnetic poles of opposite polarities formed in a direction circumferentially of the rotary member,

wherein under a thermal endurance test condition in which the magnetized encoder is subjected to 1,000 thermal cycles each consisting of heating at 120°C for one hour followed by cooling at -40°C for one hour, the magnetized encoder retains the following initial magnetic characteristics when measured at a point 2.0 mm distant from a magnetic sensor:

Single pitch deviation: ± 2% or less, and

Magnetic flux density: ± 3 mT or higher.

12. (Previously Presented) A magnetized encoder disposed on a rotary member of a wheel bearing assembly, that when measured at a distance of 2.0 mm, retains a single pitch deviation less than or equal to ± 2%, and a magnetic flux density greater than or equal to ± 3 mT, after undergoing a thermal endurance test in which the magnetized encoder is subjected to 1,000 thermal cycles of being heated at 120°C for one hour followed by cooling at -40°C for one hour.